

DETAILED ACTION

Response to Amendment

- All amendment, which combines the limitation of the previously rejected claim 7, is supported by the original claims and proposed by the examiner during the telephonic interview.
- All previous 103 rejections have been overcome by argument in the Notice of Appeal.
- The previous ODP rejections over 12/441980 have been overcome by the approved TD.
- The previous restriction has been withdrawn. All non-elected claims have been rejoined except for the cancelled claims.

Allowable Subject Matter

Claims 1-8, 10, 12-17, 19-26, 28-32 are allowable over the closest prior art: Kanetake et al. (US 6303054) in view of Hasegawa et al. (Macromolecules 1999, 387-396 as listed on IDS) and in further view of and by Wilson et al. (Polyimide, Blackie & Son Ltd, 1990, Pg. 1-2), all listed on previous 892.

As to claims 1, 4-5, 7, 16-17, and 25-26, Kanetake discloses a process of produce semiconductive seamless tubular polyimide films for intermediate belt member for transfer in a copy machine by rotational molding polyamic acid composition in NMP followed by heating (5:30-68, 6:1-55), wherein the polyamic acid composition contains carbon black uniformly dispersed in polyamic acid (4:55) and equivalent amount of

diamine and dianhydride is reacted (Ex.1). Kanetake further discloses a polyamic acid composition of molded product comprising a preferable 7-8% parts of carbon black by weight per 100 parts of polyamic acid (4:30-50) to obtain semiconductivity (electrical resistivity $10-10^{14}$ Ωcm) in polyamic acid composition (3:54-58) and high stability of resistivity (5:49-52).

Kanetake is silent on the claimed copolymer having 15-55 mol% of asymmetric dianhydride and 45-85% of symmetric dianhydride

Hasegawa discloses a polyimide prepared by blend of a first polyamic acid (symmetric dianhydride (s-BPDA) with diamine) (80%) and a second polyamic acid (asymmetric dianhydride (a-BPDA) with diamine) (20%) to improve the thermal processability of polyimide based on BPDA/diamine without decreasing the T_g (Abs.).

However, Hasegawa merely discloses the blend of S-BPDA based polyamic acid with a-BPDA based polyamic acid, which would not inherently result in the claimed copolymer having 15-55 mol% of asymmetric dianhydride and 45-85% of symmetric dianhydride. Wilson cited in the previous rejection fails to prove this. Although the production of polyamic acid via dianhydride and diamine is a reversible process, as shown by Wilson, the process thermal dynamically favors the reaction towards polyamic acid. Hasegawa's blend would not inherently result in the claimed copolymer, so Hasegawa cannot be combined with Kanetake to meet the claims.

Therefore, claims 1, 4-5, 7, 16-17, and 25-26, are allowable together their dependent claims 2-3, 6, 8, 10, 12-15, 19-24, and 28-32.

Response to Arguments

The argument for allowance of amended claims has been fully considered and persuasive. All previous rejections have been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANE FANG whose telephone number is (571)270-7378. The examiner can normally be reached on Mon.-Thurs. 8 a.m. to 6:30 p.m. EST.. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/591,326
Art Unit: 1766

Page 5

sf

/RANDY GULAKOWSKI/
Supervisory Patent Examiner, Art Unit 1766